Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

and (3) that in which the rotation of the xylem and bifurcation of the phloem of the cotyledonary bundle take place in the cotyledon (as Pinus); and that the numerous cotyledons obtaining in many plants have been formed by the splitting of the preexisting ones.—J. M. C.

Plant formations at Victoria Falls.—Miss GIBBS[27] has published an enumeration of the plants collected in two localities in southern Rhodesia during a period of three months. The list is a long one, and the new species are numerous. A second part of the paper describes the plant formations in the vicinity of Victoria Falls, three distinct regions being recognized: (1) The veldt, or open forest growth, which is found throughout southern Rhodesia, extending on both sides of the Zambesi River as far as the eye can see; (2) a region limited to the immediate banks of the Zambesi and the islands above Victoria Falls, in which *Eugenia guineensis* is dominant; (3) a region including the bog edge of Livingstone Island and that of the rainy forest in general, dominated by *Eugenia cordata*. The four plates reproduce eight photographs of characteristic plants and plant formations.—J. M. C.

Aluminum in soil and water cultures.—ROTHER[28] gives in preliminary form the work done by his pupils on the general relation of plants to aluminum.[28] The soluble salts of this metal and also to some extent the insoluble phosphates will enter the plant from soil and water cultures. Entrance to the plant occurs much more readily from the water than from the soil cultures. After entering the roots the solutes do not migrate to other tissues but accumulate in the tissues of the root, so that on analysis nearly all and in some cases all of the metal found is in the roots. Very dilute solutions were found to stimulate growth, while the more concentrated ones were toxic.—RAYMOND H. POND.

Conifers of China.—MASTERS[29] has enumerated the conifers of China, which is of special interest since the China-Japan region contains more endemic genera of conifers than any other. The 89 species recognized are distributed among 21 genera as follows: Podocarpus (7), Dacrydium, Cephalotaxus (6), Torreya (2), Taxus, Pinus (14, with 2 new species), Larix (7), Pseudolarix, Picea (15, with 3 new species), Tsuga (5), Pseudotsuga, Keteleeria (4), Abies (8, with a new species), Cunninghamia, Taiwania, Cryptomeria, Glyptostrobus, Libocedrus, Thuja (2), Cupressus (3), Juniperus (7).—J. M. C.

Freezing.—What kills a plant when it freezes? Various answers have been made to this question, the current one (PFEFFER, JOST) being that death is due to the withdrawal of water. Gorke goes a step further and shows[30] that the low temperatures besides producing various analogous changes, lead to intramolecular transpositions in the proteids, which are generally accompanied by a precipitation of a part of the dissolved ones; and when such chemical alternations surpass a definite limit death ensues.—C. R. B.

---

[27] GIBBS, MISS L. S., A contribution to the botany of southern Rhodesia. Jour. Linn. Soc. Bot. **37**:425–494. *pls. 17–20.* 1906.

[28] ROTHERT, W., Das Verhalten der Pflanzen gegenüber dem Aluminium. (Vor. Ber.) Bot. Zeit. **64**:43–52. 1906.

[29] MASTERS, MAXWELL T., On the conifers of China. Jour. Linn. Soc. Bot. **37**:410–424. 1906.

Sap-flow.—Wiegand gives a useful résumé of the facts and theories in regard to the flow of the sap from bleeding trees, especially the maple, to which he adds some observations of his own. He holds that the bleeding due to pressure of expanding gases is inadequate to account for the volume of sap exuded, and that the best explanation is the one that ascribes the pressure to the excretion of water by cells of the medullary rays, stimulated to activity by rising temperature.—C. R. B.

Glycogen and paraglycogen.—Since Massart's edition of Errera's posthumous paper on this subject,[32] drawings have been found and copied with "scrupulous fidelity." These are now issued as a supplementary paper.[33] The five plates are handsome chromolithographs showing the distribution of glycogen and paraglycogen in the rhizopods and flagellates, as well as several groups of fungi, including the Myxomycetes.—Raymond H. Pond.

Cotyledons of Trollius.—Ramaley[34] has found that the petioles of the cotyledons of *Trollius albiflorus* are united for about half their length, the plumule escaping through a slit in this sheath. Lubbock described a similar condition in *T. Ledebouri*, and it seems to be general throughout Ranunculaceae.—J. M. C.

Mycorhiza and nitrogen fixation.—Contrary to the supposition of Müller, Möller finds that the dichotomous mycorhiza of the mountain pine is of no use in fixing free nitrogen for the tree.[35]—Raymond H. Pond.

Anatomy of roots.—Holm[36] has described and illustrated the anatomical structure of the roots of species of Spigelia, Phlox, and Ruellia.—J. M. C.

---

[30] Gorke, H., Ueber chemische Vorgänge beim Erfrieren der Pflanzen. Landw. Versuchs-Stat. **65**:149–160. 1906.

[31] Wiegand, K. M., Pressure and flow of sap in the maple. Amer. Nat. **40**: 409–453. 1906.

[32] See review in Bot. Gazette **41**:370. 1906.

[33] Errera, Leo, Dessins relatifs au glycogen et au paraglycogen. Recueil de l'Institut bot. Bruxelles **1**:432–436. *pls. 5.* 1906.

[34] Ramaley, Francis, The seed and seedling of the mountain globe-flower. Univ. Colorado Studies **3**:93–95. *figs. 13.* 1906.

[35] Möller, A., Mykorhizen und Stickstoffernährung. Ber. Deutsch. Bot. Gesells. **24**:230–233. 1906.

[36] Holm, Theo., The root-structure of *Spigelia marilandica* L., *Phlox ovata* L., and *Ruellia ciliosa* Pursh. Amer. Jour. Pharmacy **78**:553–559. *figs. 5.* 1906.